VEGA BAJA SOLID WASTE DISPOSAL SITE VEGA BAJA, PUERTO RICO

EPA ID# PRD980512669

EPA REGION 2
CONGRESSIONAL DIST. 01
Arecibo District
Vega Baja

Site Description

The Site is an inactive, unlined, uncapped, 19-acre parcel of land located in a rural area of Río Abajo Ward, approximately 1.2 miles south of the town of Vega Baja, Puerto Rico. The Site is primarily residential on its northern, eastern and western sides and bordered to the south by conical hills known as "mogotes." Current ownership of individual lots on the Site has to be determined, however, the Site was owned by the Puerto Rico Land Authority (PRLA) during the time of disposal. During 1948 to 1979 the Municipality of Vega Baja dumped and/or opened burned several tons of commercial, industrial and domestic waste. The Municipality of Vega Baja operated the Site as a landfill during that time. An estimate of 1,108,540 cubic yards of waste was disposed at the landfill during the 30 years of operation. In 1979 the landfill operations at the Site were discontinued because the Municipality opened a new landfill at Cibuco Ward, Vega Baja.

During the 1970's, individuals began constructing residences on the uncapped landfill area. As of today, approximately 213 houses are located on eleven acres of the Site. In 1984, the PRLA transferred the landfill property to the Puerto Rico Housing Department (PRHD). The PRHD has in turn given title to some of the residents for the parcels on which they constructed houses. This residential community is known as Brisas del Rosario.

The Río Abajo Head Start is the nearest school, which is located 0.21 miles from the Site and contiguous to a baseball park. According to EQB's Expanded Site Investigation (ESI), the population within a four-mile radius of the Site is more than 40,000. The population within a one mile radius of the Site is approximately 6,871 and within a one quarter mile is 2,280.

During several sampling events conducted at the Site, trash and debris were observed within the yards of the residences and in their backyards. Some residents have removed the historic landfill wastes from their yards. Many houses are built on and around the landfill trash. Several of them have trash piles (mounds) with elevations more than eight feet.

EPA conducted, as part of the Removal Action, a soil sampling event at the Site from April 1998 to December 1998. A total of 3,693 samples was collected and analyzed over this period. The sampling event was divided into three phases: (1) Phase I. This phase was focused on the entire Site as one unit. A primary contaminant of concern during this phase was lead. However, the presence of other inorganic and organic contaminants were also analyzed. The sampling was conducted from April 14 to June 8, 1998. A total of 814 samples was collected and analyzed. Lead concentrations across the Site ranged up to 14,000 mg/kg (ppm). The highest lead concentration found in the residential area was 2,000 ppm at

1.0 ft depth. A total of 72 soil samples was analyzed for Pesticides and PCBs. Dieldrin was the pesticide detected most frequently and with the highest concentrations. Dieldrin was detected in 20 samples with concentrations ranging up to 950 ppb. Of the PCBs, weathered Aroclor 1254 was detected in six samples with concentrations up to 400 ppb. The Pesticide/PCB detections were found in the southern section of the Site and correlates with the occurrence of garbage. (2) Phase II. During this phase each residential lot was sampled as a discrete unit and analysis focused on soil lead content. The sampling was conducted from August 3 to November 1998. A total of 214 residential lots was sampled and 2,823 soil samples were collected and analyzed. The residential areas lead concentrations ranged up to 7,100 ppm at 1 ft. depth. An extensive area in the residential development with high lead concentration is located in the southwestern section of the Site. (3) Phase III. This phase was focused on sampling the four garbage mounds in the residential area. The sampling was conducted from December 5 to December 16, 1998. The objective of this phase was to estimate the area of the mounds, the thickness of the garbage and the level of lead contamination within the mounds. A total of 56 samples was collected and analyzed. Lead concentrations from the garbage mound sampling ranged up to 2,800 ppm.

Site Responsibility:

This site is being addressed through Federal actions

NPL LISTING HISTORY
Final Date: July 1999

Threats and Contaminants

Soil is contaminated with lead, arsenic, pesticides. Approximately 213 houses had been built on the top of the landfill. Direct exposure to contaminated soil is evident.

Cleanup Approach

On October 8, 1999 EPA conducted a CERCLA removal action on three properties. This action included the following: (1) to provide access to each affected property; (2) to disconnect and temporarily move utilities which caused an obstruction; (3) to document and remove physical obstructions; (4) to temporarily relocate residents ; (5) to turn down a residence which interfere with the cleanup activities; (6) to excavate and dispose of contaminated soil; and (7) to backfill excavated areas;

Response Action Status

A removal action is scheduled to be completed by the end of February 2001. A groundwater Remedial Investigation and Feasibility Study started on September 1999.

Environmental Progress

Three properties have been cleaned up.